

MVP Publications – January 2021



U.S. Department of Veterans Affairs

Veterans Health Administration
Office of Research & Development

| Associated MVP Project or Core Team | Publication Title | First Author(s) | Last Author(s) | Journal | Year | PMID/Journal |
|-------------------------------------|--|-------------------------|-----------------|--|------|--------------------------|
| CSP572, MVP000 | Genome-Wide Association Studies of Schizophrenia and Bipolar Disorder in a Diverse Cohort of US Veterans | Bigdeli, Tim | Harvey, Philip | Schizophrenia Bulletin | 2020 | 33169155 |
| CSP575b | Genomics of Posttraumatic Stress Disorder in Veterans: Methods and Rationale for Veterans Affairs Cooperative Study #575B | Radhakrishnan, Krishnan | Gelernter, Joel | International Journal of Methods in Psychiatric Research | 2019 | 30767326 |
| CSP575b | Validation of an Electronic Medical Record-Based Algorithm for Identifying Posttraumatic Stress Disorder in US Veterans | Harrington, Kelly | Cho, Kelly | Journal of Traumatic Stress | 2019 | 31009556 |
| CSP575b | Genomewide Association Study of Maximum Habitual Alcohol Intake in >140,000 US European- and African-American Veterans Yields Novel Risk Loci | Gelernter, Joel | Stein, Murray | Biological Psychiatry | 2019 | 31151762 |
| CSP575b | Genomewide Association Study of Posttraumatic Stress Disorder Re-Experiencing Symptoms in >165,000 US Veterans Yields New Biological Knowledge | Gelernter, Joel | Stein, Murray | Nature Neuroscience | 2019 | 31358989 |
| CSP575b | International meta-analysis of PTSD genome-wide association studies identifies sex- and ancestry-specific genetic risk loci | Nievergelt, CM | Koenen, KC | Nature Communications | 2019 | 31594949 |
| CSP575b | Reproducible Genetic Risk Loci for Anxiety: Results From ~200,000 Participants in the Million Veteran Program | Levey, Daniel | Stein, Murray | The American Journal of Psychiatry | 2020 | 31906708 |
| CSP575b | Genome-wide association analyses of post-traumatic stress disorder and its symptom subdomains in the Million Veteran Program | Stein, Murray | Gelernter, Joel | Nature Genetics | 2021 | 33510476 |

MVP Publications – January 2021



U.S. Department of Veterans Affairs

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|-------------------------------------|---|-------------------|--------------------|--|------|--------------------------|
| MVP000 | High-throughput Multimodal Automated Phenotyping (MAP) with Application to PheWAS | Liao, Katherine | Cai, Tianxi | Journal of the American Medical Informatics Association | 2019 | JAMIA |
| MVP000 | Baseline Characterization and Annual Trends of Body Mass Index for a Mega Biobank Cohort of US Veterans 2011-2017 | Nguyen, Xuan-Mai | Cho, Kelly | Journal of Health Research and Reviews | 2018 | JHRR |
| MVP000 | Prevalence of Ideal Cardiovascular Health Metrics in the Million Veteran Program | Nguyen, Xuan-Mai | Djousse, Luc | American Journal of Cardiology | 2018 | 29753396 |
| MVP000 | Million Veteran Program: A mega-biobank to study genetic influences on health and disease | Gaziano, Michael | O'Leary, Timothy | Journal of Clinical Epidemiology | 2016 | 26441289 |
| MVP000 | Gender Differences in Demographic and Health Characteristics of the Million Veteran Program Cohort | Harrington, Kelly | Whitbourne, Stacey | Womens Health Issues | 2019 | 31253243 |
| MVP000, CHAMPION | Standardized Architecture for a Mega-Biobank Phenomic Library: The Million Veteran Program (MVP) | Knight, Kathryn E | Cho, Kelly | American Medical Informatics Association (AMIA) – Joint Summits on Translational Science proceedings | 2020 | 32477652 |
| MVP000, CHAMPION | JSONize: A Scalable Machine Learning Pipeline to Model Medical Notes as Semi-structured Documents | Rush, Everett | Begoli, Edmon | American Medical Informatics Association (AMIA) – Joint Summits on Translational | 2020 | 32477675 |

MVP Publications – January 2021



U.S. Department of Veterans Affairs

Veterans Health Administration
Office of Research & Development

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|-------------------------------------|---|--|-------------------------------|---|------|--------------------------|
| | | | | Science proceedings | | |
| MVP000, MVP001 | Fried Food Consumption and Risk of Coronary Artery Disease: The Million Veteran Program | Honerlaw, Jacqueline | Djousse, Luc | Clinical Nutrition | 2019 | 31279615 |
| MVP000, MVP001 | Alcohol Consumption and Risk of Coronary Artery Disease (From The Million Veteran Program) | Song, Rebecca | Djousse, Luc | American Journal of Cardiology | 2018 | 29580627 |
| MVP000, MVP001 | Omega-3 supplement use, fish intake, and risk of non-fatal coronary artery disease and | Ward, Rachel | Djousse, Luc | Clinical Nutrition | 2019 | 30914216 |
| MVP000, MVP001 | DASH Score and Subsequent Risk of Coronary Artery Disease: The Findings From Million Veteran Program | Djousse, Luc | Gaziano, Michael | Journal of the American Heart Association | 2018 | 29680824 |
| MVP000, MVP001, MVP003, MVP028 | PCSK9 loss of function is protective against extra-coronary atherosclerotic cardiovascular disease in a large multi-ethnic cohort | Small, Aeron | Damrauer, Scott | PLoS One | 2020 | 33166319 |
| MVP000, MVP003 | The relationship between circulating lipids and breast cancer risk: A Mendelian randomization study | Johnson, Kelsey Klarin, Derek | Voight, Derek | PLoS Medicine | 2020 | 32915777 |
| MVP001 | Egg consumption and risk of coronary artery disease in the Million Veteran Program | Djousse, Luc | Cho, Kelly | Clinical Nutrition | 2020 | 31902601 |
| MVP001 | A phenotyping algorithm to identify acute ischemic stroke accurately from a national biobank: the Million Veteran Program | Imran, Tasnim | Cho, Kelly | Clinical Epidemiology | 2018 | 30425582 |
| MVP001, MVP002, MVP003 | Association of APOL1 Risk Alleles with Cardiovascular Disease in African Americans in the Million Veteran Program | Bick, Alexander Akwo, Elvis Robinson-Cohen, Cassianne Lee, K | Hung, Adriana Damrauer, Scott | Circulation | 2019 | 31337231 |

MVP Publications – January 2021



U.S. Department of Veterans Affairs

Veterans Health Administration
Office of Research & Development

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|-------------------------------------|--|--|---|---|------|--------------------------|
| MVP001, MVP002, MVP003 | Trans-ethnic association study of blood pressure determinants in over 750,000 individuals | Giri, Ayush Hellwege, Jacklyn Keaton, Jacob Park, Jihwan | Susztak, Katalin O'Donnell, Christopher Hung, Adriana Edwards, Todd | Nature Genetics | 2019 | 30578418 |
| MVP001, MVP003 | Genome-wide association study of peripheral artery disease in the Million Veteran Program | Klarin, Derek | Damrauer, Scott Tsao, Philip | Nature Medicine | 2019 | 31285632 |
| MVP001, MVP003 | Effects of Genetic Variants Associated with Familial Hypercholesterolemia on Low-Density Lipoprotein Cholesterol Levels and Cardiovascular Outcomes in the Million Veteran Program | Sun, Yan | Wilson, Peter | Circulation Genomics and Precision Medicine | 2018 | 31106297 |
| MVP001, MVP003 | Genetics of blood lipids among ~300,000 multi-ethnic participants of the Million Veteran Program | Klarin, Derek Damrauer, Scott | Assimes, Themistocles Wilson, Peter Rader, Daniel Kathiresan, Sekar Tsao, Philip O'Donnell, Christopher | Nature Genetics | 2018 | 30275531 |
| MVP001, MVP003 | Genomic and Transcriptomic Association Studies Identify 16 Novel Susceptibility Loci for Venous Thromboembolism | Lindstrom, S | Smith, NL | Blood | 2019 | 31420334 |
| MVP001, MVP003 | Harmonizing genetic ancestry and self-identified race/ethnicity in genome-wide association studies | Fang, H | Tang, H | American Journal of Human Genetics | 2019 | 31564439 |
| MVP001, MVP003 | Genetic determinants of increased body mass index mediate the effect of smoking on increased risk for type 2 diabetes risk but not coronary artery disease | Thom, Christopher S. | Voight, Benjamin F. | Human Molecular Genetics | 2020 | 32833022 |

MVP Publications – January 2021



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Veterans Health Administration
Office of Research & Development

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|-------------------------------------|--|--|---|-----------------------|------|--------------------------|
| MVP001, MVP002, MVP003 | Genetic analysis of over 1 million people identifies 535 new loci associated with blood pressure traits | Evangelou, Evangelos Warren, Helen Mosen-Ansorena, David Mifsud, Borbala Pazoki, Raha Gao, He Ntritsos, Georgios Dimou, Niki Tzoulaki, Ioanna Barnes, Michael Wain, Louise Elliott, Paul Caulfield, Mark | Hung, Adriana O'Donnell, Christopher Edwards, Todd Psaty, Bruce Tzoulaki, Ioanna Barnes, Michael Wain, Louise Elliott, Paul Caulfield, Mark | Nature Genetics | 2018 | 30224653 |
| MVP001, MVP002, MVP003 | Mapping eGFR loci to the renal transcriptome and phenotype in the VA Million Veteran Program | Hellwege, Jacklyn Velez Edwards, Digna Giri, Ayush | Susztak, Katalin Edwards, Todd Hung, Adriana | Nature Communications | 2019 | 31451708 |
| MVP001, MVP003 | Association of Interleukin 6 Receptor Variant With Cardiovascular Disease Effects of Interleukin 6 Receptor Blocking Therapy: A Phenome-Wide Association Study | Cai, Tianxi Zhang, Yichi | Liao, Katherine | JAMA Cardiology | 2018 | 30090940 |
| MVP001, MVP003 | Genome-wide association analysis of venous thromboembolism identifies new risk loci and genetic overlap with arterial vascular disease | Klarin, Derek | Natarajan, Pradeep Damrauer, Scott | Nature Genetics | 2019 | 5395047 |
| MVP001, MVP003 | Exome-wide association study of plasma lipids in >300,000 individuals | Liu, Daqiang, Peloso, Gina Yu, Haojie Butterworth, Adam Wang, Xiao Mahajan, Anubha Saleheen, Danish Emdin, Connor | Howson, Joanna Danesh, John McCarthy, Mark Cowan, Chad Abecasis, Goncalo Deloukas, Panos Musunuru, Kiran | Nature Genetics | 2017 | 29083408 |

MVP Publications – January 2021



U.S. Department of Veterans Affairs

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| | | Willer, Cristen Kathiresan, Sekar | Willer, Cristen Kathiresan, Sekar | | | |
| MVP001, MVP003 | Mendelian Randomization Analysis of Hemostatic Factors and Their Contribution to Peripheral Artery Disease | Small, Aeron Huffman, Jennifer E | Damrauer, Scott | AHA Arteriosclerosis, Thrombosis, & Vascular Biology | 2020 | 32847391 |
| MVP001, MVP003 | Chromosome 1q21.2 and additional loci influence risk of spontaneous coronary artery dissection and myocardial infarction | Saw, Jacqueline | Ganesh, Santhi | Nature Communications | 2020 | 32887874 |
| MVP002 | Genome-Wide Association Study of Apparent Treatment-Resistant Hypertension in the CHARGE Consortium: The CHARGE Pharmacogenetics Working Group | Irvin, MR | Ahluwalia, TS Arnett, AK Avery, CL | American Journal of Hypertension | 2019 | 31545351 |
| MVP002 | Genome-wide association meta-analyses and fine-mapping elucidate pathways influencing albuminuria | Teumer, Alexander Li, Yong Ghasemi, Sahar Prins, Bram Wuttke, Matthias Hermle, Tobias | Butterworth, Adam Hung, Adriana Pattaro, Cristian Kottgen, Anna | Nature Communication | 2019 | 31511532 |
| MVP002 | Target genes, variants, tissues and transcriptional pathways influencing human serum urate levels | Tin, A Marten, J Halperin Kuhns, VL Li, Y Wuttke, M Kirsten, H | Hung, AM Teumer, A Pattaro, C Woodward, OM Vitart, V Köttingen, A | Nature Genetics | 2019 | 31578528 |
| MVP002 | A catalog of genetic loci associated with kidney function from analyses of a million individuals | Wuttke, Matthias Li, Yong Li, Man Sieber, Karsten Feitosa, Mary Gorski, Mathias | Heid, Iris Scholz, Markus Teumer, Alexander Kottgen, Anna Pattaro, Cristian | Nature Genetics | 2019 | 31152163 |

MVP Publications – January 2021



U.S. Department of Veterans Affairs

Veterans Health Administration
Office of Research & Development

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| MVP003 | Genetic predisposition to smoking in relation to 14 cardiovascular diseases | Larsson, Susanna | Burgess, Stephen | European Heart Journal | 2020 | 32300774 |
| MVP003 | Urate, Blood Pressure, and Cardiovascular Disease: Evidence From Mendelian Randomization and Meta-Analysis of Clinical Trials | Gill, Dipender | Tzoulaki, Ioanna | Hypertension | 2021 | 33356394 |
| MVP003 | Genetics of Smoking and Risk of Atherosclerotic Cardiovascular Diseases: A Mendelian Randomization Study | Levin, Michael | Voight, Benjamin | JAMA Network Open | 2021 | 33464320 |
| MVP003 MVP000 | Genetic Architecture of Abdominal Aortic Aneurysm in the Million Veteran Program | Klarin, Derek | Tsao, Philip | Circulation | 2020 | 32981348 |
| MVP003 MVP004 | Genome-wide association study of alcohol consumption and use disorder in 274,424 individuals from multiple populations | Kranzler, Henry Zhou, Hang Kember, Rachel | Gelernter, Joel | Nature Communications | 2019 | 30940813 |
| MVP003, MVP028 | Validating a non-invasive, ALT-based non-alcoholic fatty liver phenotype in the million veteran program | Serper, Marina | Chang, Kyong-Mi | PLoS One | 2020 | 32841307 |
| MVP003 MVP028 | Discovery of 318 new risk loci for type 2 diabetes and related vascular outcomes among 1.4 million participants in a multi-ancestry meta-analysis | Vujkovic, Marijana | Saleheen, Danish | Nature Genetics | 2020 | 32541925 |
| MVP004 | Longitudinal drinking patterns and their clinical correlates in Million Veteran Program participants | Vickers Smith, Rachel Kranzler, Henry Justice, Amy | Tate, Janet | Alcoholism Clinical and Experimental Research | 2018 | 30592535 |
| MVP004 | AUDIT-C and ICD codes as phenotypes for harmful alcohol use: Association with ADH1B polymorphisms in two US populations | Justice, Amy Smith, Rachel Tate, Janet McGinnis, Kathleen Xu, Ke Becker, William | Kranzler, Henry | Addiction | 2018 | 29972609 |

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| | | Lee, Kuang-Yao Lynch, Kevin Sun, Ning Concato, John Fiellin, David Zhao, Hongyu Gelernter, Joel | | | | |
| MVP004 | Using DNA methylation to validate an electronic medical record phenotype for smoking | McGinnis, Kathleen Justice, Amy Tate, Janet Kranzler, Henry Tindle, Hilary Becker, William Concato, John Gelernter, Joel Li, Boyang Zhang Xinyu Zhao, Hongyu Crothers, Kristina | Xu, Ke | Addiction Biology | 2018 | 30284751 |
| MVP004 | Validating harmful alcohol use as a phenotype for genetic discovery using phosphatidylethanol and a polymorphism in ADH1B | Justice, Amy McGinnis, Kathleen Tate, Janet Xu, Ke Becker, William Zhao, Hongyu Gelernter, Joel | Kranzler, Henry | Alcoholism Clinical and Experimental Research | 2017 | 28295416 |
| MVP004 | Association of OPRM1 Functional Coding Variant With Opioid Use Disorder: A Genome-Wide Association Study | Zhou, Hang | Gelernter, Joel | JAMA Psychiatry | 2020 | 32492095 |
| MVP004 | Genome-wide association study of smoking trajectory and meta-analysis of smoking status in 842,000 individuals | Xu, Ke Li, Boyang | Justice, Amy | Nature Communications | 2020 | 33082346 |

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| MVP004 CSP575b MVP025 | Genome-wide meta-analysis of problematic alcohol use in 435,563 individuals yields insights into biology and relationships with other traits | Zhou, Hang | Gelernter, Joel | Nature Neuroscience | 2020 | 32451486 |
| MVP005 | Genetically-guided algorithm development and sample size optimization for age-related macular degeneration cases and controls in electronic health records from the VA Million Veteran Program | Halladay, Chris | Crawford, Dana | AMIA Joint Summits on Translational Science Proceedings | 2019 | 31258967 |
| MVP010 | Novel Risk Loci in Tinnitus and Causal Inference With Neuropsychiatric Disorders Among Adults of European Ancestry | Clifford, Royce | Nievergelt, Caroline | JAMA Otolaryngology - Head & Neck Surgery | 2020 | 32970095 |
| MVP Genomic Working Group | Genotyping Array Design and Data Quality Control in the Million Veteran Program | Hunter-Zinck, Haley | Pyarajan, Saiju | American Journal of Human Genetics | 2020 | 32243820 |
| Collaboration | Minority-centric meta-analyses of blood lipid levels identify novel loci in the Population Architecture using Genomics and Epidemiology (PAGE) study | Hu, Yao | Peters, Ulrike | PLOS Genetics | 2020 | 32226016 |
| Collaboration | A missense variant in Mitochondrial Amidoxime Reducing Component 1 gene and protection against liver disease | Emdin, Connor | Kathiresan, Sekar | PLOS Genetics | 2020 | 32282858 |
| Collaboration | The Polygenic and Monogenic Basis of Blood Traits and Diseases | Vuckovic, Dragana | Soranzo, Nicole | Cell Press | 2020 | 32888494 |
| Collaboration | Trans-ethnic and Ancestry-Specific Blood-Cell Genetics in 746,667 Individuals from 5 Global Populations | Chen, Ming-Huei | Lettre, Guillaume | Cell Press | 2020 | 32888493 |